

Appl. No. New Application
Preliminary Amendment

REMARKS

Claims 1-5 has been canceled. New Claims 6-17 remain active in the case.

The present invention relates a method of moving visbreaking tar having a softening point greater than 80° C.

Claim Amendment

Claims 14 and 16 have been amended to make minor changes thereto which are believed to have clarified the claims. Entry of the amendments is respectfully requested.

Claim Amendments

The claims have been amended by limiting the process of the invention to the recovery and moving of visbreaking tar. Support for the new claims can be found in the original claims and on pages 5, 6, 8 and 9 of the specification.

Invention

The present invention is the finding of a means by which a fluidized refinery material, i.e., fluidized visbreaking tar, is placed in condition that enables the material to be readily moved or transported. Thus, the process of the invention is the recovery and moving (transporting) of visbreaking tar by first fluidizing visbreaking tar by heating the tar to a temperature at least equal to the softening point of the tar, and then mixing the visbreaking tar thus made fluid with a desired quantity of water and dispersing agent which is a material selected from the group consisting of the alkali metal salts of condensates of naphthalenesulfonic acid with

Appl. No. New Application
Preliminary Amendment

formaldehyde, ammonium salts of condensates of naphthalenesulfonic acid with formaldehyde and mixtures thereof until a dispersion of oil in water is formed. This oil in water dispersion is the form by which the visbreaking tar is recovered and moved or transported as desired.

Prior Art Rejection

Applicants maintain their position as stated previously with respect to the Di Lullo patent which is that, whereas in the present invention processing involves a visbreaking tar that is first fluidized and then mixed with water and the indicated type of dispersing agent thereby forming an oil in water dispersion, in the patent, on the other hand, a dispersion is formed of a fluid that is substantially different from the visbreaking tar of the present invention which is a vacuum distillation residue. As described in literature previously submitted, a visbreaking tar results from the non-catalytic thermal processing that converts atmospheric or vacuum residues via thermal cracking to gas, naphtha, distillates and visbroken residues. Atmospheric and vacuum residues are typically charged to a visbreaker to reduce fuel oil viscosity and to increase distillate yield in a refinery. Further, the non-catalytic thermal cracking process can be conducted in the presence of hydrogen which facilitates the production of lighter hydrocarbons in the visbreaking process. Accordingly, the teaching of the Di Lullo et al patent regarding the dispersion of a vacuum distillation residue, as described in the examples of the patent, does not lead the skilled artisan to the present invention where a different type of oil in water dispersion is formed.

The deficiencies of the Di Lullo et al patent are believed to be neither overcome nor improved upon by the Ohzeki et al patent. Whereas in the present invention an oil in water dispersion is clearly formed in two steps by the initial fluidization of visbreaking tar followed

Appl. No. New Application
Preliminary Amendment

by the addition of water and a dispersant of the invention, Ohzeki et al, on the other hand, discloses the preparation of a dispersion of fine solid particles of a pitch in an aqueous medium containing an organic dispersant. In the process of the patent, patentees initially require the milling of solid pitch having a softening point of above 50° C into a mass of fine particles as taught at column 8, lines 1-5. The particulate material is then mixed with a water solution containing an organic dispersant to prepare the dispersion of the reference. There is absolutely no teaching or suggestion anywhere in the patent of forming an oil in water dispersion, and certainly no teaching or suggestion of forming an oil in water dispersion for the purpose of providing an effective means by which an oily material can be moved or transported from one area to another. Thus, the combined references are believed not to lead the skilled artisan to the present invention.

Appl. No. New Application
Preliminary Amendment

It is now believed that the application is in proper condition for consideration on its merits.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

A handwritten signature in black ink, appearing to read "F. Oblon", is written over a horizontal line.

Norman F. Oblon
Attorney of Record
Registration No.: 24,618

Frederick D. Vastine, Ph.D.
Registration No.: 27,013

Customer Number
22850

TEL: 703-413-3000
FAX: 703-413-2220